



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

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**JAN 27 1989**

OFFICE OF  
SOLID WASTE AND EMERGENCY RESPONSE

OSWER Directive 9850.4

**MEMORANDUM**

**SUBJECT:** Interim Final Guidance for Soil Ingestion Rates  
**FROM:** J. Winston Porter  
Assistant Administrator  
**TO:** Regional Administrators  
Regions I-X

**Executive Summary:**

Risk assessments are conducted at Superfund sites as part of Remedial Investigations required by the Proposed National Contingency Plan, and may be conducted at RCRA facilities undergoing corrective action as described in the soon-to-be Proposed RCRA Corrective Action Rule, to estimate the risk from exposure to substances. Within the risk assessment, an exposure assessment is performed which is based on various exposure assumptions such as soil ingestion rates. This interim final guidance provides recommended soil ingestion rate assumptions of 0.2 gram per day for children aged 1 year through 6 years and 0.1 gram per day for older age groups, in the absence of site specific data.

**Introduction and Background:**

Current Agency guidance that might be used within the OSWER programs for developing risk assessments provides ranges of different soil ingestion rates. However, no guidance is provided regarding the selection of an ingestion rate from within these ranges. In order to promote consistency within Agency guidance and the use of realistic, conservative exposure scenarios throughout the CERCLA and RCRA programs, this interim final guidance provides specified assumptions to be made for soil ingestion rates for both children and adults.



S00081929  
SUPERFUND RECORDS



**Interim Final Guidance for Soil Ingestion Rates:**

This interim final guidance supersedes previous program related guidance (Superfund Public Health Evaluation Manual, October, 1986, OSWER Directive 9285.4-01) only with reference to soil ingestion rates and should be used by regional staff who are responsible for conducting and evaluating risk assessments in OSWER related programs. This interim final guidance is based on the most recent reliable data available on soil ingestion rates. It may be revised to reflect new data the Agency may review that would significantly affect risk assessment results.

In developing exposure scenarios used in program risk assessments, a soil ingestion rate of 0.1 grams per day should be used for adults and a soil ingestion rate of 0.2 grams per day should be used for children who are one year through six years of age. These rates are based on the most recent reliable data reviewed by the Agency, and represent reasonably conservative values. This guidance does not address children who exhibit abnormal mouthing behavior (pica). The occurrence of pica behavior and the associated rates of soil ingestion have not been well defined. Without this information, risk cannot be quantified for children with pica behavior.

There may be cases where site- or facility-specific data exist on soil ingestion rates or the occurrence of pica behavior of children. In these cases, deviation from this guidance may be appropriate. However, the data supporting this deviation should be provided within the related risk assessment. If the data are provided by the potentially responsible party in the Superfund program or the owner/operator in the RCRA program, these data should be reviewed and verified by the risk assessment experts in the Regions, who may also choose to consult with Headquarters.

**Contacts:**

If there are any general questions regarding this interim final guidance, please contact Sherry Sterling, (FTS) 382-4826, of my staff. For program specific information, the following staff may be contacted:

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## OSWER Directive 9850.4

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